

IN THE CLAIMS:

Please cancel claims 35, 37, 38, 39, 41, 43, 45, 47, 50-54, and amend the claims as follows:

F6

34. (Twice Amended) An isolated polynucleotide consisting of the nucleotide sequence set forth in SEQ ID No. 1, 3, 4, 5, 10, 12, 13, or 15, said nucleotide sequence being derived from a CHD-gene of a bird or a part thereof, said polynucleotide being hybridizable to the genomic DNA of a bird.

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36. (Twice Amended) A fragment of the polynucleotide according to claim 34, which gives a specific signal only on the W chromosome upon hybridisation to the genomic DNA of a non-ratite bird, wherein said genomic DNA has been digested with restriction endonuclease.

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42. (Twice Amended) An isolated polynucleotide which hybridises under high stringency conditions to the polynucleotide according to claim 34.

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44. (Twice Amended) The polynucleotide according to claim 42, which gives a specific signal only on the W chromosome upon hybridisation to the genomic DNA of a non-ratite bird, wherein said genomic DNA has been digested with a restriction endonuclease.

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48. (Twice Amended) A method for determining the sex of a non-ratite bird or of an embryo, fetus, cell or tissue of a non-ratite bird, which comprises:

(i) obtaining either

(a) a DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof or,

(b) a cDNA reverse transcribed from RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof, or

(c) a cDNA or DNA amplified by cloning or polymerase chain reaction from DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof,

(ii) subjecting (a), (b) or (c) to restriction endonuclease digestion wherein the restriction endonuclease digestion yields hybridisable fragments of CHD-W which are of a different size to those of CHD1-A,

(iii) hybridising the polynucleotide according to claim 34 or a fragment thereof with the product of step (ii) under moderate to high stringency conditions, and

(iv) detecting the size of restriction fragments to which the polynucleotide hybridises, which result is indicative of the sex of the non-ratite bird, embryo, fetus, cell or tissue thereof.

49. (Twice Amended) A method for determining the sex of a non-ratite bird or of an embryo, fetus, cell or tissue of a non-ratite bird, which comprises:

(i) hybridising either

(a) a DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof or,

(b) a cDNA reverse transcribed from RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof, or

(c) a cDNA or DNA amplified by cloning or polymerase chain reaction from DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof,

(ii) subjecting (a), (b) or (c) to restriction endonuclease digestion wherein the restriction endonuclease digestion yields hybridisable fragments of CHD-W which are of a different size to those of CHD1-A,

(iii) hybridising the polynucleotide according to claim 42 or a fragment thereof with the product of step (ii) under moderate to high stringency conditions, and

detecting the size of restriction fragments to which the polynucleotide hybridises, which result is indicative of the sex of the non-ratite bird, embryo, fetus, cell or tissue thereof.

55. (Amended) An isolated polynucleotide consisting of the nucleotide sequence set forth in SEQ ID NO. 1, 3, 4, 5, 10, 12, 13 or 15.

Please add the following new claims:

57. (New) A method for determining the sex of a non-ratite bird or of an embryo, fetus, cell or tissue of a non-ratite bird, which comprises:

(i) obtaining either

(a) a DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof, or

(b) a cDNA reverse transcribed from RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof, or

(c) a cDNA or DNA amplified by cloning or polymerase chain reaction from DNA or RNA of the non-ratite bird, embryo, fetus, cell or tissue thereof,

(ii) performing a PCR on said DNA or RNA with primer oligonucleotides capable of amplifying a product from a CHD-W gene which is distinguishable from any product amplified from a CHD-1A gene by said primer oligonucleotides, and

(iii) detecting the presence or absence of a CHD-W specific amplification product which result is indicative of the sex of the non-ratite bird, embryo, fetus, cell or tissue thereof.

58. (New) A method according to claim 57 wherein the CHD-W specific amplification product is distinguishable from any product amplified from a CHD-1A gene by its size or by the presence or absence of a restriction endonuclease cleavage site.

59. (New) A method according to claim 58 wherein nucleotide sequences of the primer oligonucleotides are selected from the group consisting of SEQ ID NOS: 37, 38 and 39.

60. (New) An isolated polynucleotide consisting of the nucleotide sequence set forth in SEQ ID NOS: 37, 38 and 39.
